parental lineage. The QH mare represents the small proportion of solid-colored heterozygotes.

## **Acknowledgements**

The author thanks Dr. Peter Brouwers, Peterborough Veterinary Services, for his encouragement and guidance with this case.

## **References**

- 1. McCabe L, Griffin LD, Kinzer A, Chandler M, Beckwith JB, McCabe RB. Overo lethal white foal syndrome; equine model of aganglionic megacolon (Hirschsprung disease). Am J Med Genet 1990;36:336–340.
- 2. Vrotsos PD, Santschi EM, Purdy AK, Mickelson JR. Incidence of an endothelin receptor B mutation in white patterned horses; evi-

- dence for genetic heterogeneity in the overo coat pattern. Plant Anim Genome VII Conf, San Diego, California, 1999.
- 3. Bowling AT. Dominant inheritance of overo spotting in paint horses. J Hered 1994:85:222–225.
- 4. Yang GC, Croaker D, Zhang AL, Manflick P, Cartmill T, Cass D. A dinucleotide mutation in the endothelin-B receptor gene is associated with lethal white foal syndrome (LWFS); a horse variant of Hirschsprung disease. Human Mol Gene 1998;6:1047–52.
- James RM, Santschi EM. Role of the endothelin receptor B gene in overo coat color pattern and lethal white foal syndrome. Plant Anim Genome VII Conf, San Diego, California, 1999.
- Lane PW, Liu HM. Association of megacolon with a new dominant spotting gene (Dom) in the mouse. J Hered 1984;75:435–439.
- Santschi EM, Purdy AK, Valberg SJ, Vrotsos PD, Kaese H, Mickelson JR. Endothelin receptor B polymorphism associated with lethal white foal syndrome in horses. Mamm Genome 1998; 4:306-309.

## **BOOK REVIEW**



## COMPTE RENDU DE LIVRE

World Health Organization. *Foodborne Disease:* A Focus for Health Education. World Health Organization, Geneva, 2001, 198 pp, ISBN 92-4-156196-3, US\$55.80.

ealth education on the prevention of foodborne disease is of the utmost importance. You are not convinced? Would you change your mind if you discovered that foodborne diseases caused by bacteria, parasites, viruses, toxins, and chemical residues are much more prevalent than you had realized? What if you were told, for example, that every year, 8% to 10% of the population is affected by a foodborne disease? Now, what if you were to learn that, over the last 30 years, the frequency of foodborne diseases has increased by over 300%? That type of information, along with precise statistics on foodborne diseases, costs of foodborne diseases, economic implications and various factors affecting prevalence rates of foodborne diseases, is given in Foodborne Diseases: a Focus for Health Education. But this book gives you much more than that. Contrary to the false belief that foodborne diseases are only mild gastroenteritis, you will find that many foodborne diseases could also result in serious acute complications, such as haemolytic uremic syndrome, or chronic sequellae, such as chronic arthritis, Guillain-Barré syndrome, etc.

The 3 basic lines of defense against foodborne diseases are explained: namely, the increase of hygiene of raw foodstuff in agriculture and aquaculture; the application of food processing technologies to control contaminants at the processing level; and, the most critical, the education of consumers and food handlers. Multiple examples of the behaviors (socio-economics, cultural, etc.) that influence foodborne diseases are also provided. The authors then explain the Hazard Analysis: Critical Control Point (HACCP) concept as an internationally accepted tool to manage food safety hazards.

The book highlights the fact that food safety is the shared responsibility of all stakeholders, including policy-makers, food producers, food processors, food handlers, and consumers. These various groups need to be educated to their respective roles in the prevention of foodborne diseases. To be successful in reducing foodborne diseases, it is not sufficient to have a pathogen reduction policy and to perform inspections. Any country wishing to decrease foodborne diseases needs to develop and implement a food safety education program. This is a key component of a farm to fork implementation of HACCP-based systems, and it is an integral part of risk management. A lot of material has already been developed, and this volume provides many useful references to the existing material that could be used as a starting point for food safety educators.

Key elements for setting up a food safety education program on a national basis or for a specific segment of the population are explained. The book also provides criteria that could be used to evaluate the food safety education programs, based on practical international experience. At the end of the volume, a table of characteristics, transmission, and preventive measures is given for major foodborne diseases. A table on issues to risk communication is also provided.

The conclusion of the book states, "It is hoped that this book will make a positive contribution to the quest for increased health education in food safety." That would be indeed my personal conclusion after having read the book, which is a must for any person involved in food safety education or, even, in food safety risk communication.

Reviewed by Robert Charlebois, DMV, MSc, A/National Manager, Meat Programs, Canadian Food Inspection Agency, 59 Camelot Drive, Nepean, Ontario K1A 0Y9.